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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/844,759	04/26/2001	J. J. Garcia-Luna-Aceves	5543P004	2123

7590 10/01/2007
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EXAMINER

CHANKONG, DOHM

ART UNIT	PAPER NUMBER
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2152

MAIL DATE	DELIVERY MODE
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10/01/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	09/844,759	GARCIA-LUNA-ACEVES ET AL.	
	Examiner	Art Unit	
	Dohm Chankong	2152	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 July 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,6-12 and 15-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,6-12 and 15-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>7/16/07, 3/23/07, 7/11/05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1> This action is in response to Applicant's amendments and arguments, filed 7.16.2007. Claims 1, 7, and 10 are amended. Claims 18-20 are added. By way of Applicant's amendment, claims 1, 2, 6-12, and 15-20 are presented for further examination.

2> This is a final rejection.

Response to Arguments

3> Applicant has amended claim 1 to include a first and second request, the second being a single IP packet request to resolve the anycast address and having the anycast network address. Claims 7 and 10 have been amended merely to clarify that a request to resolve is a single IP packet. Applicant presents two arguments: (1) the cited prior art references fail to disclose receiving a second request to resolve the anycast network address at the information object repository and (2) the cited prior art references fail to disclose resolution response is a single IP packet. Applicant's arguments have been fully considered but they are not persuasive.

As to (1), this limitation suffers from §112 issues. Claim 1 recites receiving a first request for an information object at the information object repository and receiving a second request at the information object repository. However, nothing in Applicant's specification recites this functionality. Specifically, there is no disclosure in Applicant's specification that recites that the repository receives two requests, one request for an information object, the second to resolve the anycast network address. Instead, Applicant's specification recites

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receiving a first request at the information repository and the repository sends a second request to resolve the anycast [pgs. 21-22, 0042].

Additionally, even if the limitation, as it is written, is supported by Applicant's specification, the previous action cited Horikawa to teach the functionality [see non-final rejection, 4.12.2007, pg. 5, item 10]. As set forth in the previous action, Horikawa disclosed sending a second request to resolve an anycast network address, where the request is a single IP packet [column 2 «lines 39-43»: "IP datagram" | column 5 «lines 33-37 and 49-54» | column 7 «lines 40-51»]. Applicant does not address this reasoning in the remarks. Therefore, it is maintained that McCanne as modified by Horikawa discloses the claimed limitation of a receiving a second request, resolving the second request and returning an anycast response in response to the second request to resolve.

As to (2), Applicant asserts that the cited references fail to disclose a request that is a single IP address having the anycast network address and a response that is a single IP packet having a corresponding unicast address. Applicant asserts that McCanne does not disclose this limitation. Contrary to Applicant's arguments, McCanne discloses these limitations.

McCanne discloses a request to resolve the anycast network address, the request being a single IP packet having the anycast network address [column 16 «lines 52-53»: service request to the anycast address A. This teaching implies that the request has the anycast network address]. Further, McCanne discloses that the response to the request is a single IP packet having the corresponding unicast address [column 10 «lines 40-43» | column 16 «lines 57-58»: client is redirected to a "normally-addressed and routed (unicast)" service node.

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Thus, it can reasonably be inferred that the redirection message has the unicast address to the service node for which the client is to be redirected].

Based on the foregoing discussion, Applicant's arguments are not persuasive and Applicant's amendments do not overcome the cited prior art references. Therefore, the rejections of claims 1, 2, 6-12, and 15-17 as set forth in the previous Office action are maintained.

4> Examiner notes that new claims recite selecting a repository based on Web Information Locator by Distance (WILD) protocol which is described in Applicant's provisional application, 60/200401. After reading the provisional, Examiner interprets this protocol as determining "distance" by using type-of-service performance parameters such as average delay, average processing delay, reliability of path, and availability of the path [pgs. 12-13] If this is an improper interpretation, Applicant is free to introduce new limitations that will clarify the protocol.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5> Claims 1, 2, 6, 16, and 18 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one

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skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

As discussed above, claim 1 recites an information object repository that receives a first and second request. Applicant's specification fails to recite this functionality. Specifically, the specification does not describe a second request being received at the information object repository, the second request requesting the resolution of the anycast address or that the second request has an anycast network address. Rather, the only description of a single IP packet as a second request is a request that is sent from the information object repository; this packet requests to resolve the anycast address [Applicant's specification, pgs. 21-22, 0042]. If Applicant disagrees with this §112 rejection, Applicant should cite specific sections within the specification that support the claimed limitations.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6> Only those claims that have been added or amended by Applicant are formally addressed in this action. For the substance of the rejections for those claims not formally addressed in this action, refer to the prior Office action, filed 4.12.2007, hereby incorporated by reference.

7> Claims 1, 2, 5, 6, 7, 8, 10, 11 and 16 are rejected under 35 U.S.C § 103(a) as being anticipated by McCanne et al, U.S Patent No. 6,415,323 ["McCanne"], in view of Yamano, U.S Patent No. 6,314,088, in further view of Horikawa et al, U.S Patent No. 5,822,320 ["Horikawa"].

8> As to claim 1, McCanne discloses a method comprising:

selecting an information object repository to receive a request for an information object at an anycast network address, wherein the request comprises a single IP packet that includes the network layer anycast address [column 3 «lines 62-67» | column 8 «lines 10-13» : see response to arguments above];

receiving a request at an information object repository for an information object at an anycast network address [column 8 «lines 14-23» | column 11 «lines 58-62» where : McCanne's ARN and the service nodes are analogous to repositories].

resolving the request to a corresponding unicast address for the information object [column 11 «lines 60-62» | column 15 «line 61» to column 16 «line 35» where : McCanne's service nodes have unicast addresses].

McCanne does not explicitly disclose instructing the information object repository to obtain a copy of the information object at the corresponding unicast address.

McCanne does not expressly disclose (1) a second request to resolve the anycast network address. McCanne does disclose returning an anycast resolution response, the anycast resolution response comprising a single IP packet having the corresponding unicast

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network address [column 10 «lines 40-43» | column 16 «lines 17-29» : a redirection message that directs a client to a “normally-addressed and routed (unicast) service node”] but does not disclose (2) the response is in response to a request to resolve the anycast address.

9> With respect to (1) McCanne does disclose that the repository is capable of servicing the clients' requests directly but does not explicitly disclose obtaining a copy at the corresponding unicast address [column 14 «lines 27-32» | column 16 «lines 3-11»]. Yamano discloses a repository (that receives an request for an object at an anycast address) that obtains a copy of the requested information object at a corresponding unicast address [Figure 5 | column 1 «lines 21-30» | column 4 «lines 30-36» | column 5 «line 64» to column 6 «line 15» where : Yamano's configuration server node 11 retrieves the object requested by the client from another server node's ATM address (unicast)]. Therefore Yamano teaches that a repository, that acts as a redirector such as one seen in McCanne, can also retrieve content from other repositories within the network. One of ordinary skill in the art would have been able to incorporate Yamano's functionalities into McCanne's repository (redirector) to allow the repository to retrieve content from other repositories at the corresponding unicast address to be able to directly service the request in the future. Since McCanne already teaches that his repository can directly handle content requests, implementing Yamano's teaching would only enhance McCanne's capabilities.

10> With respect to (2), Horikawa discloses a client sending two requests, one of the requests being a request to resolve the anycast network [column 5 «lines 33-37 and 49-54» |

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column 7 «lines 40-51»]. It would have been obvious to one of ordinary skill in the art to incorporate Horikawa's teachings into McCanne's proximity redirection system. One would have been motivated to combine the references in such a manner because Horikawa teaches that a benefit of the request to resolve improves upon traditional address resolution systems [column 3 «lines 36-48»].

11> As to claims 7 and 10, as they do not teach or further define over the prior art references, they are similarly rejected for at least the same reasons set forth for claim 1.

12> Claims 18-20 are rejected under 35 U.S.C §103(a) as being unpatentable over McCanne, Yamano and Horikawa, in further view of Grove et al, U.S Patent No. 6,820,133 ["Grove"].

13> As to claims 18-20, McCanne discloses routing resolution and object requests to the "closest" service node [column 6 «lines 17-20»] but does not disclose selecting the repository based on the WILD protocol. Grove discloses that "closeness" of network objects can be defined by different performance metrics including "bandwidth capacity, bandwidth cost, latency...and current congestion on various network paths" [column 5 «lines 59-67»]. Grove further discloses using such a determination within an anycast system [column 19 «lines 27-37»].

Thus, it would have been obvious to one of ordinary skill in the art to have modified McCanne's repository selection scheme to include the "closeness" metrics taught by Grove. The use of such metrics takes into account current network performance which one of

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ordinary skill in the art would have appreciated as providing an enhanced scheme for selecting the best repository.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

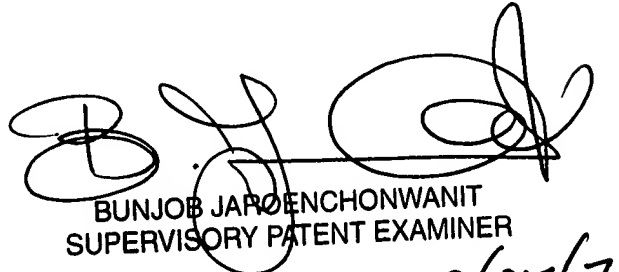
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dohm Chankong whose telephone number is 571.272.3942. The examiner can normally be reached on Monday-Friday [8:30 AM to 4:30 PM].

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bunjob Jaroenchonwanit can be reached on 571.272.3913. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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9/27/7